ADITYA ABISHAI PEDAPATI

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Education

New York University	**September 2023 – May 2025**
Master of Science in Mechatronics and Robotics	*New York, US*

Vasavi College of Engineering	**August 2019 – May 2023**
Bachelor of Engineering in Mechanical Engineering	*Hyderabad, India*

Experience

Project Mjolnir, NYU — **October 2023**
Design Engineer — *New York, US*
- Working with an international team to optimize an adaptive mountain bike for wheelchair users.
- Integrated quick release levers on backrest and footrest for ease of use.

KIA India Pvt Ltd — **February 2023 – May 2023**
Project Intern — *Ananthapur, India*
- Interned in the vehicle quality control department in the plant with a capacity to produce over 300,000 cars annually.
- Worked along with industry leading engineers and researchers to bring down the defects per unit (DPU) below one(1).
- Analyzed the defects on vehicles by implementing RCA and drafted an approach to reduce the defects.
- Optimized KIA Carens by redesigning the tailgate and improving the structure of Body in White (BIW) in record time.
- Reprogrammed the assembly bot.

RE Sustainability — **August 2022 – September 2022**
Intern — *Hyderabad, India*
- Interned at the South India's largest waste to energy conversion plant which produces 28 MW of RDF by consuming 1,200 tons of waste per day
- Developed an approach to utilise drones to spray 75 lts of liquid odorite to keep the stench in check.

IIT Madras Research Park — **April 2022 – July 2022**
Project Intern — *Chennai, India*
- Spearheaded a team of five to design and build an autonomous cotton crop harvester under the guidance of Dr. Shital Chiddarwar.
- Modeled a robot by integrating mecanum wheels, placing a 6 DOF robot and improving the payload capacity.

Projects

Driver Drowsiness Detection — **November 2023**
- Working on developing and implementing a drowsiness detection system by leveraging computer vision and machine learning techniques to improve road safety.

SonarDuino — **November 2023**
- Developed a 360 degree radar system for object detection. Enhanced the capabilities of locomotive robots by providing SonarDuino which helps in object detection.

Analysis of Cooling of a Gas Turbine Blade — **April 2023**
- Solid modeled gas turbine blades of NACA 65 series.
- Analyzed the cooling of the blades by varying different properties such as material, cross-section, number of holes, type of fluid, etc.

Temperature Monitoring System — **February 2023**
- Built a temperature monitoring system using LM35 and ESP 12E.
- This notifies the user by SMS or mail when the temperature crosses the threshold.

Soil Moisture Monitoring System — **January 2023**
- Built a tool which monitors the moisture level of soil and helps the user to water his/her plants on time.

Technical Skills

Programming Languages: Python, C++, C, MATLAB, LATEX, Rust
CAD and Simulation Tools: SolidWorks, Siemens NX, Fusion 360, Inventor, Ansys Fluent, Ansys Workbench, Lotus Shark
Machine Learning and Robotics: Numpy, OpenCV, ROS, MuJoCo